

209650US0DIV

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :

Keiichi YOKOYAMA et al : ATTN: APPLICATION BRANCH

SERIAL NO: NEW U.S. APPLICATION :

FILED: HEREWITH :

FOR: PROCESS FOR PRODUCING MICROBIAL
TRANSGLUTAMINASE

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

Sir:

In advance of prosecution, please amend the above-identified application as follows:

IN THE SPECIFICATION

Please amend the specification as follows:

Page 8, line 19, please replace the paragraph with the following:

The DNA of the present invention encodes the above-mentioned proteins. Among these, the preferred is a DNA wherein a base sequence encoding for Arg at the forth position from the N-terminal amino acid is CGT or CGC, and a base sequence encoding for Val at the fifth position from the N-terminal amino acid is GTT or GTA. Furthermore, the preferred is a DNA wherein a base sequence encoding for the N-terminal amino acid to fifth amino acid, Ser-Asp-Asp-Arg-Val, (SEQ ID NO: 62) has the following sequence.

Page 9, line 6, please replace the paragraph with the following:

In this case, the preferred is a DNA wherein a base sequence encoding for amino acid

sequence of from the N-terminal amino acid to fifth amino acid, Ser-Asp-Asp-Arg-Val, (SEQ ID NO: 60) has the sequence TCT-GAC-GAT-CGT-GTT (SEQ ID NO: 61).

Pages 15 & 16, please replace the paragraph with the following:

In fact, a sequence of Met-Ser-Asp-Arg- · · · · · (SEQ ID NO: 62) was designed by deleting N-terminal aspartic acid residue from transglutaminase derived from microorganism (MTG), and this was produced in E. coli. As a result, methionine residue was efficiently removed and thereby there was obtained a protein having a sequence of Ser-Asp-Asp-Arg- · · · · ·. It was confirmed that the specific activity of the thus-obtained protein is not different from that of natural MTG.

Please delete the original Sequence Listing at page 27-63 without prejudice.

Page 67, after the last line, beginning on a new page, please insert the attached substitute Sequence Listing.

IN THE CLAIMS

Please cancel Claims 3-25.

REMARKS

Claims 1 and 2 are active in this application. This application is a Divisional of Serial No. 09/448,310 filed on November 24, 1999, allowed.

The specification has been amended to insert Sequence identifiers for SEQ ID NO: 60-61 and to insert the attached Sequence Listing.

The paper copy of the Sequence Listing in this application is identical to the computer readable Sequence Listing filed in application 09/448,310 filed November 24, 1999. In accordance with 37 CFR § 1.821 (e), please use the last-filed computer readable

form filed in that application as the computer readable form for the instant application. It is understood that the Patent and Trademark Office will make the necessary change in application number and filing date for the instant application. A paper copy of the Sequence Listing is included herewith. No new matter is believed to have been added by the foregoing amendments.

Applicants submit that the present application is ready for examination on the merits. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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IN THE SPECIFICATION

Please amend the specification as follows:

Page 1, after the Title, insert

--This application is a Divisional of Serial No. 09/448,310 filed November 24, 1999, allowed, which is a Continuation of Serial No. 09/109,063 filed July 2, 1998, now U.S. Patent No. 6,013,498.--

Page 8, line 19, please replace the paragraph with the following:

The DNA of the present invention encodes the above-mentioned proteins. Among these, the preferred is a DNA wherein a base sequence encoding for Arg at the forth position from the N-terminal amino acid is CGT or CGC, and a base sequence encoding for Val at the fifth position from the N-terminal amino acid is GTT or GTA. Furthermore, the preferred is a DNA wherein a base sequence encoding for the N-terminal amino acid to fifth amino acid, Ser-Asp-Asp-Arg-Val, (SEQ ID NO: 62) has the following sequence.

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efficiently removed and thereby there was obtained a protein having a sequence of Ser-Asp-Asp-Arg- It was confirmed that the specific activity of the thus-obtained protein is not different from that of natural MTG.

IN THE CLAIMS

Please cancel Claims 3-25.